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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,988	01/02/2002	Takahiro Yamagishi	388-011672	8931

28289 7590 11/03/2004

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EXAMINER

CHAWAN, SHEELA C

ART UNIT PAPER NUMBER

2625

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/937,988	<b>Applicant(s)</b> YAMAGISHI ET AL.	
	<b>Examiner</b> Sheela C Chawan	<b>Art Unit</b> 2625	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2002.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 17-40 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 17-40 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 16 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/17/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

2. The Examiner has approved drawings filed on 1/2/02.

### ***Preliminary Amendment***

3. Preliminary amendment filed on 1/2/02 has been entered.

Cancel the previous claims 1-16 and added new claims 17- 40 are as follows.

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 17- 40 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,753,527 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because the invention discloses in the instant application and the claims in the patent are obvious variants over each other. The only difference of a plurality of imaging device would be at least an obvious if not inherent. Furthermore, claims in the instant application are broader than the claims in the Patent, otherwise we might not have a double patenting rejection.

For example, claims 17, 19, 25 and 27 of instant application encompass the subject matter that overlaps with the subject matter covered by claims 1 and 11 of the Patent as follows:

As to claim 17, discloses a method of imaging a liquid-filling container, comprising the steps of: (U.S. Patent No. (6,753,527 B1), Preamble teaches (see claim 1, column 11, line 25), comprising the steps of:

emitting and irradiating light onto the container by a light emitting unit U.S. Patent No. (6,753,527 B1), see claim 1, (column 11, lines 29- 30), receiving the light transmitted through the container by a light receiving unit U.S. Patent No. (6,753,527 B1), see claim 1, (column 11, lines 31- 33), and imaging the container based on information about the transmitted light, wherein said light emitting units and irradiates a

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near infrared light as said light for imaging the container U.S. Patent No. (6,753,527 B1), see claim 1, (column 11, lines 34 - 38).

Similarly, claims 18, 20-24, 26 and 28 – 40 of the instant application encompass the subject matter that overlaps with the subject matter covered by the claims 2-10 and 12-20 of the Patent.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17 - 21, 24 - 29, 32 - 33, 36 - 37 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Novini (US. 5,095,204).

As per claim 17, Novini discloses a machine vision inspection system (fig 2, element 20) and method for transparent containers (abstract, fig 2, column 6, lines 3-16, column 7, lines 54- 59), comprising the steps of:

emitting and irradiating light onto the container by a light emitting unit (fig 3, element 40, illumination source consists of several hundred of light emitting diode (LED) arranged in a matrix (fig 3B, element 46, column 8, lines 37- 65), receiving the light transmitted through the container by a light receiving unit (fig 3, column 8, lines 3- 65), and imaging (fig 3, element 30, corresponds to imaging, column 8, lines 3- 15) the container (fig 3, element 24, column 8 line 8 -15) based on information about the

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transmitted light, wherein said light emitting unit emits and irradiates a near infrared light as said light for imaging the container (fig 3, column 8, lines 37- 65, column 9, lines 29- 49 ).

As to claims 18, 20, 26, and 28, Novini discloses the method, wherein said light emitting unit comprises a light emitter (fig 3, element 40, illumination source consists of several hundred of light emitting diode (LED) arranged in a matrix (fig 3B, element 46, column 8, lines 37- 65), and a cut filter (fig 3, filters may be placed in front of the lens 32 of the camera 30, column 9, lines 50- 55) for filtering light from the light emitter so as to transmit only near infrared light component of the light (column 9, lines 54 - 61) or a greater amount of near infrared light component than visible light component of the light.

As to claim 19, see the rejection of claim 17.

As to claim 27, see the rejection of claim 19.

As to claims 21, 29, 33 and 37 Novini discloses the method, wherein said light emitting unit and said light receiving unit are disposed so as to enable imaging of a container which are conveyed one after another along a conveying line (column 1, lines 13- 26, column 8, line 66 through column 9, line 16).

As to claims 24, 32, 36 and 40, Novini discloses the method, further including, the step of detecting any foreign substance present in the container or in a material forming the container (column 8, lines 3-15).

As to claim 25, see the rejection of claim 17.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

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obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(a) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 22 -23, 30 - 31, 34-35, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Novini (US. 5,095,204), as applied to claims 17-21, 24 - 29, 32-33, 36 - 37 and 40 above and further in view of Manique et al., (US.5,523,560).

Regarding claims 22, 30, 34 and 38 Novini discloses a system and method for inspecting the bottom surface of transparent container with possible uses of machine vision technology include assembly/process verification, gauging, character verification and recognition, surface flaw detection, sorting systems, and robotic guidance. In many of these applications, machine vision systems can also provide important and

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accurate process control information since 100 percent of the product can generally be examined. This information can help identify the "problem area(s)" of the process so it can be corrected to reduce scrap and improve quality.

Novini does not disclose expressly the step of detecting an amount of liquid filled in the container.

Manique discloses a method of inspecting a liquid -filled container for one or more test parameters of the liquid, the container, or both, which method comprises rotating and axially line scanning said liquid -filled container, while it is rotated according to a predetermined rate profile and simultaneously line scanned axially, the scanned data being analyzed. The system comprises of:

the method including step of detecting an amount of liquid filled in the container ( column 1, lines 45 - 64, column 5, lines 30- 42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Novini to include step of detecting an amount of liquid filled in the container. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Novini by the teaching of Manique in order comply with rules of good manufacturing practice and warrants of products and also the quality of each entity of inspected in such a way that their outcome results in either rejection or approval of the inspected entity as (as suggested by Manique at column 1, lines 44- 53, column 8, lines 8- 16).

As to claims 23, 31, 35 and 39 Manique discloses the method, further including the step of detecting any foreign substance present in the liquid filled in the container



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(column 2, line 65 through column 3, line 10, column 12, line 63 through column 13, line 7).

***Other prior art cited***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gochar, Jr. (US.6,384, 421B1) discloses vision system for industrial parts.

Nordbryhn et al., (US. 6,433,338 B1) discloses method and device for identification of a type of material in an object and utilization therefor.

Chang et al., (US.4,915,237) discloses comprehensive container inspection system.

Harris et al., (US.4,651,879) discloses automatic bottle sorting system.

Tucker (US.4,924,107) discloses system for inspecting the inside surfaces of a container for defects and method therefor.

***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela C Chawan whose telephone number is 703-305- 4876. The examiner can normally be reached on Monday - Thursday 8 - 6.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 703-308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*SCC*  
Sheela Chawan  
Patent Examiner  
Group Art Unit 2625  
October 16, 2004